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(54) Title: PROTEINS, SENSORS, AND METHODS OF CHARACTERIZING ANALYTES USING THE SAME

(57) Abstract: A protein sensing molecule is capable of binding an analyte in a sample. The protein sensing molecule includes a first detectable quality that changes in a concentration dependent manner when the protein sensing molecule is bound to the analyte. The protein sensing molecule also includes a second detectable quality that does not undergo substantial change when the protein sensing molecule is bound to the analyte. The protein sensing molecule may be used in methods for characterizing samples and may also be used in sensors.

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